Important updated prescribing information LANOXIN®(digoxin) Tablets

OUR LABELING HAS CHANGED, BUT NOT THE PRODUCT
Recent pharmacokinetic studies of digoxin using radioimmunoassay suggest that serum levels within the therapeutic range (1 to 2 ng/ml) can be achieved with doses lower than those previously recommended.
As the discoverer of digoxin and the leading manufacturer of this product, B.W. Co.® has accordingly modified the dosage recommendation for Lanoxin brand Digoxin, and has expanded the information concerning precautions, adverse reactions, warnings, and contraindications. Please note: *the product has not changed.* Below you will find brief prescribing information. You may obtain complete prescribing literature from your Burroughs Wellcome Representative or by writing to Department PML.

Brief Summary of Prescribing Information: Lanoxin® (digoxin)
Contraindications: The presence of toxic effects induced by any digitalis preparation is a contraindication to all of the cardiac glycosides.
Allergy, though rare, does occur. It may not extend to all preparations and another may be tried.
Ventricular fibrillation is generally a contraindication.
Warnings: Dosage must be carefully titrated. Monitoring of ECG and serum digoxin levels may be necessary to avoid intoxication.
Many arrhythmias for which digitalis is advised are identical with those reflecting digitalis intoxication. If the possibility of digitalis intoxication cannot be excluded, cardiac glycosides should be temporarily withheld if permitted by the clinical situation.
Patients with congestive heart failure may complain of nausea and vomiting which may also be indications of digitalis intoxication. Clinical determination of the cause of these symptoms must be attempted before further drug administration.
Patients with renal insufficiency are apt to be unusually sensitive to digoxin.
The use of digitalis glycosides in the treatment of obesity is dangerous.
Precautions: Atrial arrhythmias associated with hypermetabolic and febrile states are particularly resistant to digitalis treatment. Care must be taken to avoid digitalis toxicity if digoxin is used to help control the arrhythmia.
Potassium depletion sensitizes the myocardium to digitalis and toxicity is apt to develop even with usual dosage. Potassium wastage may result from diuretics, corticosteroids, hemodialysis, malnutrition, old age, and long-standing congestive heart failure.
Acute myocardial infarction, severe pulmonary disease, or far advanced heart failure often are accompanied by a greater sensitivity to digitalis and its disturbances of rhythm.
Calcium may produce serious arrhythmias in digitalized patients.
With myxedema, digitalis requirements are less.
Incomplete AV block, especially in patients subject to Stokes-Adams attacks, may develop to advanced or complete heart block when cardiac glycosides are given.
Chronic constrictive pericarditis is apt to respond unfavorably to digitalis.
Idiopathic hypertrophic subaortic stenosis must be managed with great care.
Renal insufficiency delays the excretion of digitalis, and dosage must be adjusted accordingly in patients with renal disease.
Electrical conversion of arrhythmias may require adjustment of digitalis dosage.
Congestive failure accompanying acute glomerulonephritis requires extreme care in digitalization.
Rheumatic carditis, especially when severe, causes sensitivity to digitalis. If heart failure develops, digitalization may be tried with caution.
A digitalis preparation must be used with caution in cases of ventricular tachycardia, in which case it is indicated only if congestive heart failure is a contributing factor.
If the patient has been given digoxin during the previous week, or any other less rapidly excreted drug of the digitalis group during the previous two weeks, the dose of Lanoxin brand Digoxin must be reduced accordingly. Because of impaired renal function and excretion in elderly patients, they frequently require lower than recommended doses.
Dosage of digoxin must be carefully titrated and differences in the bioavailability of parenteral preparations, elixirs and tablets taken into account when changing patients from one preparation to another.
Adverse Reactions:
Allergic reactions.
Gynecomastia.
Overdose or toxic effects in children.
The toxic signs differ from the adult in a number of respects. Vomiting and diarrhea, neurologic, and ophthalmological disturbances are rare as initial signs. Cardiac arrhythmias are the more reliable and frequent signs of toxicity.
Premonitory signs of toxicity in the newborn are undue slowing of the sinus rate, sinoatrial arrest, and prolongation of the PR interval.
Overdose or toxic effects in adults.
Anorexia, nausea, vomiting, and diarrhea are the most common early symptoms of overdose in the adult. Uncontrolled heart failure may also produce such symptoms.
Headache, weakness, apathy, and visual disturbances (blurred vision, yellow vision) can be signs of digitalis toxicity in adults.
Ventricular premature ectopic activity is the most common arrhythmia, except in infants and young children where nodal and atrial arrhythmias are more common.
Excessive slowing of the pulse is a clinical sign of digitalis overdose.
Atrioventricular block of increasing degree may proceed to complete heart block.
NOTE: The ECG is fundamental in determining the presence and nature of these toxic disturbances. Digitalis may also induce other changes (as of the ST segment), but these provide no measure of the degree of digitalization.
Treatment of Toxic Effects Produced by Overdose: Digitalis is discontinued until after all signs of toxicity are abolished.
Potassium chloride may be given in divided doses totaling 4 to 6 g for adults (in children, 1 to 1.5 mEq per kg), provided renal function is adequate. ECG monitoring is indicated to avoid potassium toxicity, e.g., peaking of T waves.
Caution: Potassium should not be used and may be dangerous in severe or complete heart block due to digitalis and not related to any tachycardia.
Other agents which have been used in treatment of digitalis intoxication include lidocaine, quinidine, procainamide, and beta-adrenergic blocking agents.

Dosage and Administration:
Recommended doses are practical average figures which may require considerable modification as dictated by individual sensitivity or associated conditions. Diminished renal function is the most important factor which requires modification of recommended or average doses. Clearance of digoxin from the serum is proportional to the glomerular filtration rate as estimated by renal creatinine clearance. The excretion of digoxin thus varies directly with creatinine clearance, and the ratio of the two clearances is near unity. As a result, an estimate of creatinine clearance gives a reasonable value for digoxin clearance, and a dose of digoxin may be reduced in proportion to the observed creatinine clearance.
Children 2 to 10 Years of Age.
The total dose of Lanoxin brand Digoxin for complete digitalization of children from 2 to 10 years of age is 40 to 60 µg per kg body weight. Initially, ¼ to ½ of the total digitalizing dose is given, followed by ¼ of the total dose at 6-hour intervals until digitalization is completed.
Maintenance therapy is 20 to 30 percent of the digitalizing dose administered each day.
Children 10 Years of Age and Over.
Children 10 years of age and over require adult proportions by weight. Maintenance therapy is 20 to 30 percent of the digitalizing dose administered each day.
Adults.
The average digitalizing dose (i.e., amount accumulated) with digoxin tablets is 1.0 to 1.5 mg. A loading dose of 0.5 to 0.75 mg orally usually produces a detectable effect in 1 to 2 hours, which becomes maximal in 6 to 8 hours. Additional doses of 0.25 to 0.50 mg may be given cautiously at 6- to 8-hour intervals to full digitalization.
The usual daily oral maintenance dose is 0.125 to 0.50 mg (usually 0.25 mg). In elderly patients, 0.125 to 0.25 mg should be considered the average maintenance dose. In the presence of renal failure, the daily amount administered must be decreased by an amount proportional to renal impairment, in order to achieve therapeutic levels.

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